WSTR 8465
PATENT

AMENDMENTS TO THE CLAIMS

1. (Original) An air induction system for an engine to receive intake air, remove contaminants from the intake air, and provide the intake air for delivery to the engine, the system comprising:

a housing having a hollow interior with at least one entryway for receiving intake air into the housing, a contaminant separator for removing contaminants from the air, and an exit for discharge of air from the housing;

a duct positioned adjacent the exit of the housing to receive intake air therefrom for delivering the air to said engine, the duct having an inside defining an internal flow path for intake air and an outside; and

a seal positioned between the housing and the duct for preventing passage of air therethrough;

wherein the seal is disposed between the outside of the duct and the housing such that the seal is not exposed to air flowing in the internal flow path of the duct.

2. (Original) An air induction system as set forth in claim 1 wherein the seal is flexible and resilient.

3. (Original) An air induction system as set forth in claim 2 wherein the seal comprises an annular band clamped along opposite edges to the housing and duct.

4. (Original) An air induction system as set forth in claim 3 wherein the seal is made of silicon rubber.

5. (Original) An air induction system as set forth in claim 1 wherein the housing further comprises a nacelle and a frame at

a back end of the nacelle, the frame having an opening therein comprising said exit, and wherein a front of the duct is received through the opening.

6. (Original) An air induction system as set forth in claim 5 wherein the seal extends between the outside of the duct and the opening in the frame.

7. (Original) An air induction system as set forth in claim 6 wherein the frame has a flange extending around the opening, the seal being clamped against the flange.

8. (Original) An air induction system as set forth in claim 6 wherein the duct has a rigid protrusion on its outside, the seal being clamped against the protrusion.

9. (Original) An air induction system as set forth in claim 8 wherein the protrusion comprises an L-shaped body extending in a ring around the outside of the duct.

10. (Original) An air induction system as set forth in claim 1 wherein said entryway comprises an opening formed in the housing, the contaminant separator being mounted across the entryway.

11. (Original) An air induction system as set forth in claim 10 wherein the contaminant separator comprises a barrier filter having a porous media.

12. (Original) An air induction system as set forth in claim 1 wherein the housing further comprises a nacelle and a frame on a back end of the nacelle, the nacelle being hinged to

the frame for swinging movement between a closed position for engine operation and an open position for maintenance.

13. (Original) An air induction system as set forth in claim 12 further comprising a rod which secures the nacelle at the open position so that it will not inadvertently move.

14. (Original) An air induction system as set forth in claim 13 wherein the rod has a first end secured to the frame and a second end secured to the nacelle, the first end being slidably movable in a slot attached to the frame.

15. (Original) An air induction system as set forth in claim 14 wherein the rod and slot are shaped and arranged to assume a locking position when the nacelle swings to the open position.

16. (Original) An air induction system as set forth in claim 15 further comprising a spring at the second end urging the rod to lock the nacelle at the open position.

17. (Previously presented) An air induction system for an aircraft engine to remove contaminants from intake air and deliver the air to the engine, the system comprising:

a contaminant removal assembly for receiving intake air and removing contaminants from the air, the assembly having at least one entryway for receiving intake air and an exit for discharge of the air from the assembly;

a duct configured to receive intake air from the assembly for delivery to said engine, the duct having an internal flow path; and

a flexible and resilient seal positioned between said assembly and the duct for preventing entry of contaminated air;

wherein the seal is not exposed to air flowing in the internal flow path and permits relative movement between the duct and the assembly in any direction while maintaining a seal between the duct and the assembly.

18. (Original) An air induction system as set forth in claim 17 wherein the seal comprises an annular band clamped along opposite edges to the contaminant removal assembly and the duct.

19. (Original) An air induction system as set forth in claim 18 wherein the seal is made of silicon rubber.

20. (Original) An air induction system as set forth in claim 17 wherein the contaminant removal assembly further comprises a nacelle and a frame at a back end of the nacelle, the frame having an opening therein comprising said exit, and wherein a front of the duct is received through the opening.

21. (Original) An air induction system as set forth in claim 20 wherein the nacelle is hinged to the frame for swinging movement between a closed position for engine operation and an open position for maintenance.

22. (Original) An air induction system as set forth in claim 21 further comprising a rod which secures the nacelle at the open position so that it will not inadvertently move.

23. (New) An air induction system for an aircraft engine to remove contaminants from intake air and deliver the air to the engine, the system comprising:

a nacelle comprising a housing having outer sides and a hollow interior, at least one side having an opening with a filter panel mounted therein for receiving intake air into the housing, an exit opening located in the housing for discharging air received into the housing through the filter panel toward the engine, a flange projecting axially from the housing and extending around the exit opening in the housing;

a transition duct for directing intake air exiting the exit opening of the housing toward the engine, the duct being attached to and supported by the engine, a portion of the duct being positioned through the exit opening in the housing and suspended within the opening, an outer surface of the duct being spaced from an edge of the exit opening so that the duct can move conjointly with the engine and with respect to the nacelle without the duct engaging the housing of the nacelle, the portion of the duct received in the housing having a bell-mouth shaped end for receiving intake air; and

a flexible and resilient seal positioned between the housing of the nacelle and the duct for preventing entry of unfiltered air through the outer surface of the duct and the edge of the exit opening, the seal extending around the outer surface of the duct such that the seal is not exposed to air flowing in the flow path inside the duct, the seal being formed from an elastic material for permitting relative movement between the duct and the housing of the nacelle while maintaining an airtight seal between the duct and the housing, the seal being stretchable to about twice its unloaded length without damaging the seal, the seal including a slack portion equal to about twice the length required for the seal.